Rule WLM359: I/O ACTIVITY PROBABLY DID NOT CAUSE MAJOR DELAYS

Finding: I/O activity probably was not a significant factor in the UNKNOWN delay.

This finding applies only to MVS versions prior to OS/390 Release 3, and to MVS versions with OS/390 Release 3 if I/O Priority Management has **not** been specified.

Impact: This finding has NO IMPACT. The finding is produced for information purposes.

Logic flow: The following rules cause this rule to be invoked:

Rule WLM300:	Service Class was delayed for UNKNOWN delay
Rule WLM301:	Server Service Class was delayed for UNKNOWN delay

Discussion: As described in the above rules, the UNKNOWN category of workload delay means that the Workload Manager was unable to identity the cause of the delay. The delay normally is caused by something over which the System Resources Manager has no control. This delay category potentially includes I/O delay, ENQ delay, etc.

CPExpert estimates the amount of the delay that might have been attributed to I/O operations. The process by which CPExpert makes the estimate is described in Rule WLM350. CPExpert produces Rule WLM350 if the I/O activity might have caused significant delays.

CPExpert produces Rule WLM359 if the I/O activity probably did not cause significant delays. The purpose of Rule WLM359 is to alert you to the possibility of other factors that may cause the UNKNOWN delay.

The following example illustrates the output from Rule WLM359:


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RULE WLM359: I/O ACTIVITY PROBABLY DID NOT CAUSE MAJOR DELAYS

   DASD activity probably did not account for much of the UNKNOWN delay
   when Service Class TPNSODD (Period 6) missed its service goal.  The
   average DASD I/O response time was multiplied by the average number
   of I/O operations per transaction to estimate the potential delay that
   might be caused by I/O activity.  The below data shows intervals when
   DASD I/O delay apparently was not a significant in causing TPNSODD to
   miss its service goal:

                         AVERAGE   ESTIMATED
                        I/O COUNT TOTAL DASD  ---AVERAGE DASD I/O TIMES---
   MEASUREMENT INTERVAL  PER TRANS TIME/TRANS  RESP  DISC  CONN  PEND  IOSQ
   15:00-15:16,01MAR1994       0       0.002  0.006 0.002 0.003 0.001 0.000
```

Note that the "AVERAGE I/O COUNT PER TRANS" is shown as "0" in the example, while the "AVERAGE DASD I/O TIMES" columns show values. This is because of the precision of the printed results. The average I/O count per transaction actually was a very small value and rounding produced "0" as the value (that is, less than half of the transactions issued an I/O instruction recorded by SMF).

Suggestion: This finding is produced simply for information purposes.

